

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
COMMON MULTIPLE CONNECTOR, ITEM 330 ----- SV778872-26 (1)	2/2	330FM16 Electrical open. Battery Recharge Sense Line. Failure, broken or defective wire, faulty connection.	END ITEM: No recharge sensing signal will be available. GFE INTERFACE: Vehicle battery charger will not receive a recharge sensing signal and will shut down. Battery charging will stop. MISSION: Loss of use of one EMU. CREW/VEHICLE: None. TIME TO EFFECT /ACTIONS: Seconds. TIME AVAILABLE: N/A TIME REQUIRED: N/A REDUNDANCY SCREENS: A-N/A B-N/A C-N/A	A. Design - Potting and strain relief is provided for the cable at the points of stress. The lead wires are potted within a trough in the Multiple Connector housing. This prevents damage to the wires during Multiple Connector assembly to the Valve Module and during dynamic environmental loading. Lead wires are strain relieved at the connector by having the wire insulation extend into the flexible rubber connector body. This prevents breakage due to handling and environmental load fatigue. The mating connector is guided into proper position before the pins are properly aligned, preventing pin damage. The connector is allowed to float and adjusts as necessary during mating to insure proper pin alignment. The electrical leads are protected from mechanical damage by a cover and are bundled together and laced. Short line lengths and bundling of the electrical lines prevent mutual chafing. Leadwire connections to the CAM switch are soldered per NHB5300.4 (3A-1) to insure reliability. Leadwire connections to the DCM half electrical connector are crimped per SVHS 4909 Type II to insure reliability. B. Test - In-Process Test - Continuity testing between J1-16 and J1-11 is performed per Operation 130 of the DCM External Wiring Assembly (SV774161-1) Operational Sheets. Resistance specification is 0.160 ohm max. Acceptance (O2/H2O Manifold) - Electrical open of the Battery Recharge Sense Line is tested for at H.S. by performing a continuity test per AT-E-385. The resistance from the Battery Recharge Sense Line to the Battery Recharge Line (J1-16 and J1-11) must not exceed 0.120 ohm. PDA Test - Electrical open of the Battery Recharge Sense Line is tested by performing a continuity test per SEMU-60-015. The Battery Recharge Sense Line resistance must be less than 1.0 ohm. Certification Test - Certified for a useful life of 15 years. C. Inspection - The DCM External Wiring Assembly is visually inspected at Final Inspection per Operation 170. The solder on the CAM switch are visually inspected per Step 7 of Operation 50. Before a DCM electrical connector pin crimp joint can be made, the crimp samples that have a minimum tensile strength of 6 lbs. (per SVHS4909 Type II). D. Failure History - None. E. Ground Turnaround - Tested for non-EET processing per FEMU-R-001, V1103.02 Orbiter Checkout. FEMU-R-001 Para 8.2 EMU Preflight KSC Checkout for EET processing.

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		330FM16		F. Operational Use - Crew Response - Pre/PostEVA: Troubleshoot problem, if no success continue EVA operations. Use spare battery if available. Use other EMU to recharge batteries. Training - Standard EMU training covers this failure mode. Operational Considerations - EVA checklist procedures verify hardware integrity and systems operational status prior to EVA. Flight rules define go/no go criteria related to SCU power.

EXTRAVEHICULAR MOBILITY UNIT
SYSTEMS SAFETY REVIEW PANEL REVIEW
FOR THE
I-330 COMMON MULTIPLE CONNECTOR
CRITICAL ITEM LIST (CIL)

EMU CONTRACT NO. NAS 9-97150

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